To:      T10 Technical Committee
From:   Steven Fairchild, HP (steve.fairchild@hp.com)
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Subject: 03-058r0 SAS SMP error codes

**Related documents**
sas-r03 - Serial Attached SCSI revision 3

**Overview**
The function specific portion of the FUNCTION RESULT codes currently use the same codes to represent different errors. To simplify the handling of errors in the SMP space it is desirable to change the FUNCTION RESULT codes to a non-overlapped list of codes and interpretations. The current codes are;

| | |
|---|---|
| DISCOVER | 10h PHY DOES NOT EXIST |
| REPORT PHY ERROR LOG | 10h PHY DOES NOT EXIST |
| REPORT PHY SATA | 10h PHY DOES NOT EXIST |
| | **11h PHY DOES NOT SUPPORT SATA** |
| | **12h SATA RESET HALTED** |
| | **13h PHY NOT SATA** |
| REPORT ROUTE INFORMATION | 10h PHY DOES NOT EXIST |
| | **11h INDEX DOES NOT EXIST** |
| CONFIGURE ROUTE INFORMATION | 10h PHY DOES NOT EXIST |
| | **11h INDEX DOES NOT EXIST** |
| PHY CONTROL | 10h PHY DOES NOT EXIST |
| | **11h PHY OPERATION FAILED** |
| | **12h UNKNOWN PHY OPERATION** |
| | **13h OTHER ERROR** |

The non-overlapped list would be;

    10h - PHY DOES NOT EXIST
    11h - INDEX DOES NOT EXIST
    12h - PHY DOES NOT SUPPORT SATA
    13h - PHY NOT SATA
    14h - SATA RESET HALTED
    15h - PHY OPERATION FAILED
    16h - UNKNOWN PHY OPERATION
    17h - GENERAL PHY CONTROL ERROR

**Suggested changes to SAS**

Change table 148 to:

"~~11~~12h PHY DOES NOT SUPPORT SATA"
"~~12~~14h SATA RESET HALTED"

Change table 159 to:

"~~11~~15h PHY OPERATION FAILED"
"~~12~~16h UNKNOWN PHY OPERATION"
"~~13~~17h ~~OTHER~~GENERAL PHY CONTROL ERROR"

**Discussion**

Should also consider adding a master SMP error list, like SCSI errors.